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List of Abbreviations

CA	Customs Administration
CAPPR	Croatian Association for the Protection of Performers' Rights
CARDS	Community Assistance for Reconstruction, Development and Stabilisation
CCS	Croatian Composers' Society
CFDG	Croatian Film Director's Guild
CMA s	Collective Management Associations
CPA	Croatian Phonographic Association
DHFR	Croatian film directors' guild
DHK	Croatian writers' association
DZNAP	Journalists' rights protection association
ECI	European creativity index
EPO	European Patent Organisation
EU	European Union
FDI	Foreign direct investment
HDS ZAMP	Croatian composers' society
HUZIP	Croatian performers' rights collecting society
IPRs	Intellectual property rights
IPRI	Intellectual Property Rights Index
MAFWM	Ministry of Agriculture, Forestry and Water Management
MELE	Ministry of the Economy, Labour and Entrepreneurship
MFIN	Ministry of Finance
MJ	Ministry of Justice
MSES	Ministry of Science, Education and Sports
NAP	National Action Plan
NIPS	National intellectual property system
OECD	Organisation for Economic Co-operation and Development
OHIM	Office for Harmonisation in the Internal Market
R&D	Research and development
SAO	The State Attorney's Office
SIPO	State Intellectual Property Office
SPC	Supplementary protection certificate
TRIPS	Trade Related Aspects of Intellectual Property Rights Agreement

UN	United Nations
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organization
WTO	World Trade Organization
ZANA	Association for the protection of publishers' rights
ZAPRAF	Association for the protection, collection and distribution of phonogram producers' rights

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1. Introduction

Intellectual property is a term that is constantly being mentioned by politicians, economists and scientists. Every now and then we are being reminded by the media of this important, intangible ownership category. Why is intellectual property at the centre of so many people's attention? This is one of the questions this paper attempts to answer.

Intellectual property was also the central topic of the World Trade Organization (WTO) negotiations called The Uruguay Round where special attention was dedicated to The Trade Related Aspects of Intellectual Property Rights Agreement (TRIPS). Today, this agreement is one of the basic and most important international agreements that form the global politics of intellectual property protection.

Many economic analysts have announced the change and the beginning of the new economy that would trade not only material goods but also trade and exploit new ideas and inventions under a reliable legal and social framework that would provide protection for these immaterial goods. To make this change and transfer possible, every society has to develop awareness not only about ideas and their values but also about the rights accompanying those ideas. Protection of the rights of any intellectual property is a necessary condition for development of knowledge economy.

Relying on related literature, this paper divides the world of intellectual property into two groups; developed, industrialized countries or the "North" and developing countries or the "South" in order to define the differences in the degree of awareness of intellectual property ownership and rights.

Intellectual property is a term that describes a broad range of confidential information that can be protected by intellectual property rights such as patents, copyrights and trademarks. Intellectual property rights (IPRs) grant the inventor, author or originator exclusive rights of dissemination and commercialisation of the idea or innovation.

Ownership is one of the main concerns of IPRs followed by the profit and who should be entitled to it. In the Western world the situation regarding the concept of private property appears less complicated than, for instance, in developing countries and this is becoming a

problem because of an increasing global expansion and transfer of new technologies across international boundaries. Inventors and authors of new knowledge are concerned about ownership of their products. Following their concerns they also try to contribute to the development of protection on new products, although their reward is often expressed in recognition and status rather than in financial terms.

After a brief introduction to intellectual property, this paper starts with the early history and development of intellectual property rights. It defines and describes intellectual property and briefly discusses important intellectual property rights. Based on the lessons from history and the experience of developed countries implications and suggestions for the development of IPRs in developing countries are presented. Issues regarding IPRs are brought to attention to point out that a perfect legal framework for IPR protection remains undiscovered although the WTO has achieved much success on a global level through the introduction of TRIPS.

That is why chapter 3 talks about the impacts of stronger IPRs (under framework of TRIPS) on both developed and developing countries. Again both groups are brought to attention, although the South and the effects of stronger IPRs on the South is the focal point of the research. As discussed in the paper, the South fears that stronger IPRs would prevent access to new knowledge and technology and, eventually, hinder their economic growth. In contrast, the advocates of stronger IPR protection suggest that TRIPS would encourage channels of technology transfer and that way induce growth. In the literature presented in this paper, both theoretical views and empirical results are in this case ambiguous, suggesting that tighter IPRs could have positive, as well as negative effects on developing countries or the South.

Finally, the paper presents the situation and the state of IPRs in Republic of Croatia. Chapter 4 shows to what extent the Croatian legislature and the justice system recognize and protect intellectual property. The Croatian system of intellectual property protection is part of the wider, global frame of this protection. While Croatia was part of the Austro-Hungarian monarchy it had an established system of IPR protection. The Croatian independent system was established shortly after the establishment of the republic alone and on December 31st 1991 the State Intellectual Property Office was founded and remained the essential institution in the field of IPR protection (Katulić, 2006). The State Intellectual Property Office also cooperates with the World Intellectual Property Organization on employment of multinational agreements. The fourth section summarizes legislation and institutional frameworks, projects

and co-operations and the state of intellectual property protection in Croatia. Finally, the last section draws conclusions from the theoretical and empirical findings presented throughout the paper.

2. History of Intellectual Property Rights

Looking back in time, the beginnings of intellectual property rights can be found within the breakthrough of capitalism and the printing press. Although notions of intellectual property can be found throughout history, until the rise of the printing press not much effort was undertaken to control the use of written work as intellectual property. There was also a difference in how different cultures viewed the concept of ownership. Collective cultures did not have a sense of individual ownership of an idea or a technical advancement as was the case in the individual cultures. These differences have contributed to discrepancies between cultures and difficulties in establishing a unique trading system across the globe (Garmon, 2002).

Idris (2003) states that the concept of intellectual property was born during the Renaissance period in northern Italy. In 1474 the first law that encouraged the protection of an individual's intellectual property was implemented under Venetian law. Around the year 1440 Johannes Gutenberg's innovation of the printing press had contributed to the development of copyright law. By the end of the 19th century many countries implemented their first intellectual property laws that were led by industrial modernisation and the rise of cities, railways and the need for organised governments and stronger nationalism. The next step was to organise intellectual property rights at the international level and that was achieved by the Paris Convention for the Protection of Industrial Property in 1883, and the Berne Convention for the Protection of Literary and Artistic Works in 1886 (Idris, 2003). The whole purpose of the IPRs establishment, that which characterised it throughout history, is the promotion and stimulation of innovative research and artistic work. The idea that motivated such a system was that research and any other creative work would not happen if it did not have the reward and ownership rights granted to the creator.

Most countries that are now marked as developed started with the introduction of patent law between 1790 and 1850 and in the second half of the nineteenth century started implementing copyrights and trademarks. These laws were inadequate at that time but they offered a strong foundation for today's laws. Patent laws of that time caused high costs of application and insufficient protection for the patentee.

The first idea of creating an international system for IPRs emerged after many more countries implemented these laws. The first attempt in creating such a system was witnessed within the Vienna Congress in 1873. In 1878 the Paris Congress started to work on an official international IPR system. This draft agreement named the Paris Convention of the International Union for the Protection of Industrial Property was eventually signed by eleven countries and, at the time, included patent laws and trademarks. The Paris Convention (which was afterwards revised several times), together with the Berne Convention, was signed in 1883 including copyrights. It was the basis for an international IPRs system until the signing of the TRIPS agreement (Chang, 2001).

Throughout history and across many developed countries, some industries were not allowed to be granted patents. Industries and their goods for example, such as medicine in France, were not able to be granted patents. In England this was the case with chemical products until recently when they received licenses for pharmaceutical and food products. In Germany patents could not be granted for food products, pharmaceuticals, and chemical products, although manufacturers were able to receive protection for the innovation while still in the process of creating them (Khan, 2002).

This history of discretionary grants shows an attempt to promote industrial progress in particular industries. During the past several hundred years, patent laws and copyrights have changed significantly and have undergone an evolution into what they are today. The history of early industrialised countries and the evolution of their patent and copyright systems were usually used as a role model for attempts to implement those systems in other countries.

2.1. Types of IP

Maskus (1993) classified intellectual property into two types; industrial and artistic. The industrial type of intellectual property includes all inventions that are valuable to industry, whilst the artistic type refers to inventions in the fields of art and literature. Before major technological breakthroughs it was easier to classify products in one of the categories. However, with today's highly connected and technologically-professional world this has become a problem. This is owing to the fact that the new technologically-improved products are more complicated to classify simply only as an artistic or only as an industrial property. A modern-day product will often have characteristics combining both.

2.2. IP and Property Rights

Intellectual property, as a knowledge form for which society has decided it needs legal protection, is provided with specific property rights. Property rights refer to those that are similar to ownership rights over land or other kinds of physical property.

In a recent context intellectual property has proven to be important in the example of developed countries although the significance varies from industry to industry. For instance in pharmaceutical, petroleum, and chemical industries, patents have shown to be crucial for promoting innovation in these industries. In the case of other industries, such as film, music, and publishing industries, copyrights have been proven to be the key factor (CIPR, 2002:11).

Industrial and artistic properties, being classified differently, thus have different levels of protection. Industrial property can be legally protected through; patents, several forms of distinctive marks, industrial designs, and some domestic laws that offer a protection against unfair competition. Artistic property finds legal protection in copyrights and related forms of protection, such as Sui Generis systems which include; Integrated Computer Circuits, Plant Breeders' Rights, and Database Protection.

2.2.1. Patents

Patents offer an exclusive right over the making, use, selling and importing of a new product, service or process. The pharmaceutical, chemical and machinery industries are those where patents are the most common form of industrial property protection.

Patents promote technological and business competition because the information on innovation remains private for some period of time and during that time the owner of patent rights can achieve technological and business advantages while competitors are forced to invest in their research if they wish to reach to that standard.

Patents provide their owners with exclusive rights. This is what makes it the most powerful form of IPRs. However, at the same time it is the most controversial form because competitors and followers insist on their right to access these protected technologies. Patents are granted in fields of technology and, in the United States, for products in ornamental designs. Some inventions, however, may not be granted patents owing to moral reasons and in order to protect public health or security.

In general, patents are granted on a “first-to-file” basis, which means that those who file first and submit all the required documents are granted the patent. Contrary to this in the United States there was a “first-to-invent” law in place, which results in the patent being granted to those who can prove that they were first in inventing the product. However, in order to be in compliance with the TRIPS Agreement, in 1999 the United States changed to the “first-to-file” rule.

Patents are granted when an invention has all of the following characteristics:

- Novelty (they are unknown)
- Comprising an inventive step
- Usefulness

In addition to this there are three types of patents that can be obtained:

- Invention Patents

The TRIPS Agreement provides this type of patent with a duration of twenty years. Invention patents or just patents must contain something non-obvious that either enhance a particular step in an invention or result in advancement in technology.

- Utility Models

These are granted in mechanical fields and may comprise of a certain degree of non-obviousness. These kinds of patents do not necessarily refer to an invention as such but usually an improvement in an existing invention and they are of a shorter duration.

- Industrial Designs

Patents given under this section have a specific purpose. This is to protect the ornamental and the aesthetic side of a commercial product from unauthorized copying or imitation. According to the TRIPS agreement their duration is a minimum of ten years (Maskus 2000a).

Much has been said about patents being a legal tool for creating monopoly power but patents are, first and foremost, useful and beneficial to the economy. There are four main arguments that, in a way, justify the existence of patents.

The first is that the granting of patents provides an incentive to research and engage in any other creative activity as well as to take on the costs of development. Patents are, in a way,

ensuring a return on investment. For this to occur, they must contain enough incentive not only to encourage research but to promote commercialisation.

Another argument states that after providing exclusive rights to an owner of a patent the society is supposed to benefit from the invention itself. The part of the invention that is claimed through a patent remains disclosed but the patent requires that the technical information about an invention must be public. This is done so as to assist others in their research resulting in them using this information and assimilating it in their own inventions without infringement.

The third argument refers to the actual granting of a patent. What is suggested is that it promotes the market for knowledge development and circulation.

Finally, the fourth and most controversial argument is that well-known patents promote follow-on innovations. This suggests that the owners of exclusive rights continue to research and innovate on the patented good. The strongest argument for this statement is that without exclusivity provided to the owners of a patent, a wasteful duplication of research activities would exist (Maskus, 2000a).

Although patents were introduced early on in history their purpose is still questionable. One of the main arguments for their existence raises questions such as whether patents are significant for promoting innovation and commercialisation. Investment in technological advancement is usually provoked naturally through competitiveness and market rivalry. In the cases where investment in innovation was induced naturally, patents are an unnecessary option. The second question that arises here is whether a patent is a low-cost option to provoke the investment. If protection granted by patents is too weak they can end up being insufficient in providing returns on investment and, on the other side, if the protection is too strong, patents can provide the market power and excessive returns to the owners. These inventions serve, not only to their inventors or corresponding industries, but to the whole society. The fact certainly not questionable here is that society benefits from new inventions through their development and spillovers. To prove that patent protection plays an important role in this process is more complicated because there is yet to be a mountain of empirical evidence surfacing. It is also difficult to set up an environment to explore this fact and so

many involved can only suggest that patents do play a key role in promoting investment in innovation (Maskus, 2000a).

2.2.2. Trademarks

Another form of protecting industrial property is provided through distinctive marks, such as trademarks, service marks, and trade names. Distinctive marks are used to register products and firms with a distinctive symbol to differentiate them from the competitors on the market.

Trademarks identify the origin of a product and promote its sales as well as contribute to the achievement of customer loyalty. Trademarks are a basic part of franchising and they also contribute to product differentiation and increasing of market share. In contrast to patents and copyrights, trademarks can be granted for an indefinite time which makes them a very powerful intellectual property tool.

In order to gain a trademark it is necessary to go through registration formalities leaving enough time for others to disapprove and raise concerns in the case of the trademark violating another previously existing mark. Trademarks are granted to the first person wishing to register them in the majority of countries but not in the United States.

Through trademarks it is possible to protect the design or symbol that identifies the producer and this creates the basis on which it is possible to build up a reputation, so that consumers will be willing to pay more for a distinctive brand. This very premium that consumers are willing to pay describes the return for costs of developing and marketing that product. If others would be allowed to duplicate the mark or make a similar one that could confuse the consumers, costs of development and marketing would not be recoverable (Maskus, 2000a).

Maskus (2000a) defines the difference between trademarks and patents by analysing that trademarks do not protect the additional knowledge but the origin of a creation. Critics of trademarks see this fact as a distinction of what makes trademarks not as beneficial for the society because they preserve the existing market power without promoting new creations. Furthermore, he states that trademarks identify the products and firms and their level of quality, in the end, decreasing the consumer's search costs. It also gives the incentive for firms to preserve or improve the quality level, in order to prevent the damaging of their image

on their marks. In general, it can be said that trademarks improve the general level of quality and also promote new product differentiations.

2.2.3. Industrial Designs and Indication of Sources

Industrial designs and indication of sources, also known as geographic indications, offer a similar protection. The latter identifies a good through a geographical region from where it originates and to which it is specific, while the former is a specific and aesthetic characteristic of a good's packaging that differentiates it from others. Food products, wines, and spirits bear a special form of protection and that is a geographical indication. This identifies the geographical origins of these products and their characteristics that are attributed to these geographic areas. Without this form of IPRs it would be possible for all producers to market their products as if they were originated from another geographic area which could endanger the reputation of the marketed area and decrease the investments in marketing.

TRIPS offer two levels of protection in the case of geographic indications; Firstly, they require from each of the participating countries to provide legal means to prevent any attempt of fraud in claiming the geographical origin. Secondly, TRIPS provide, in the case of wine and spirits, special protection restraining false use of geographical indication, even if the indication contains terms such as "kind" or "imitation". TRIPS also advocate this law to develop at an international level to secure a higher level of protection (Maskus, 2000a). TRIPS required the creation of an international register for wines that would include all member countries of the World Trade Organization (WTO). They were not able to achieve an agreement on whether this register should be an official obligation for all of the members or it should be on a voluntarily basis. The Doha Ministerial Conference extended this requirement to include spirits as well (CIPR, 2002).

No matter how these forms of protection operate from country to country, their main purpose is to reduce consumers' search costs, protect them from fraud about the product's origin and to protect the reputations of quality.

2.2.4. Domestic Laws

Many countries have implemented domestic laws against unfair competition to prevent and sanction behaviour such as bribery, industrial espionage, and disclosure of trade secrets which can be crucial in trade competition.

“The term “trade secrets” covers any form of industrial or commercial know-how that (a) supports efficient production and (b) is maintained within the enterprise and its licensees as proprietary information. Such secrets could be chemical formulas underlying production of foods, medicines, and industrial chemicals, methods for heat transfer, construction techniques, bookkeeping or management systems, customer lists, and so on.”(Maskus, 2000a: 64-65)

Trade secrets are protected through liability laws which cannot fit into the framework of IPRs in a classic sense.

In comparison with patents, society can benefit economically much more from the protection of trade secrets. The protection of trade secrets would induce innovation and reduce competition in research and development, since patents would not be necessary in this case.

There is, however, a problem with the liability law against unauthorized disclosure of trade secrets and that is dichotomous and holds the full liability for illegal ways to disclose the secret and no liability at all for legal attempts. This concept of the law gives the incentive for the firms to engage in finding those legal ways to desired information (Maskus, 2000a).

2.2.5. Copyrights and Related Rights

Copyrights provide exclusive rights to exploit, not the good itself, but its expression. In other words, copyrights provide rights to copy the expression of an idea which must be an original creation and provided in tangible form (Maskus, 1993). Unlike the conditions for a patent grant for an invention to be novel, to receive a copyright, an invention must be an original work and must be able to demonstrate it. Another condition is that the invention must be expressed through a medium, for instance, a book, recording, or software. In general, it is not necessary for an invention to go through a registration process but only to determine when the work/invention was created.

A copyright grants protection to the owner, typically, in the duration of their lifetime and additionally fifty to seventy years. Owners cannot renew the copyrights and the works are public for free use from the date of expiration of a copyright. Copyright is a form of protection of an original work and its main purpose is to prevent unauthorised copying, reproduction, broadcasting or performance of that particular work. Members of the Berne Convention are obligated to provide moral or authors' rights to prevent any modifications of the work. Some countries have employed so-called neighbouring rights to protect those who distribute the work and their interests.

“Fair-use-doctrine” is a term describing the exceptions from copyrights and this is used differently across the world. Usually this term describes activities that can benefit from the works protected by copyrights such as education, science or technology. Copyrights are more flexible for the use in the mentioned fields framed under the term of “fair-use-doctrine” and allow duplication, reproduction and use of works under citation (Maskus, 2000a).

Maskus (2000a) states that copyrights are similar to patents in their purpose to protect literary and artistic works just as patents protect industrial works in order to benefit the society by promoting investment in creative activities. Similarly, copyrights limit the circulation and distribution of literary works, which limits the education progress and increases the costs of it. The concept of copyrights attempts to create the balance between the protection of works, returns for their owners and benefits for the society.

Related rights to copy rights are *suis generis* systems that include the following:

- Integrated Computer Circuits – specific form of protection for design of integrated computer circuits in duration of ten years (under TRIPS).
- Plant Breeders' Rights – protection for breeders of new, distinctive, and stable varieties of plants usually offering protection with a duration of fifteen years.
- Database Protection – this law was implemented by the European Union for protection of databases (CIPR, 2002:13).

Copyrights should be observed and noted frequently, especially in the modern-day information age. This is especially important for developing countries that are struggling to cross over to the information age and develop their knowledge-based industries. One of their

major concerns is the protection of learning material through copyrights, which is what makes it harder for them to achieve their goals in the knowledge-based economy.

The last decade has seen so much advancement within the information and communication technology spheres and still millions of people from poorer countries do not have access to education material or other copyrighted works. This very rapid development has led to tighter copyright protection advocated strongly by developed countries who lobbied first for TRIPS and the World Intellectual Property Organization (WIPO) Copyright Treaty and then for *sui generis* protection systems developed by the European Union in 1996. The essential task for developing countries is then how to find a balance between copyright protection and a guarantee for access to knowledge (CIPR, 2002).

2.3. The Purpose and Use of IPRs

Advocates of IPRs suggest strongly that IPRs are crucial for the stimulation of economic growth. They argue that promoting investment in innovation and development of new technologies will induce industrial production which would, in the end, result in decreasing the poverty or diseases by creating new medicine.

Opponents of IPRs are just as vocal as the advocates and argue that IPRs are not significantly helpful in promoting innovation in developing countries because of their lack of human and technical resources (CIPR, 2002). While in developed countries, the opponents suggest, IPRs are a way to create and preserve monopoly power.

Despite the issues relating to IPRs, it would be more than wrong to say that IPRs are a legal tool for creating monopolies. The main purpose of IPRs is to put frames and boundaries to others violating the owner's rights. These boundaries are very important especially in a competitive market with many firms competing for technical advantage. With IPRs these boundaries are established and protected from any infringement. Any attempts from owners to extend these rights are usually denied in order not to make them a legal tool for monopolies. IPRs do help in the other way and create market power, which again varies between products and countries.

It is not easy to measure or compare the achievements of creative activities. They can be expressed in big innovations that bring major changes or small innovations in product

developments and although they can all be patented their contributions to the economy are different and not easily measurable.

Nevertheless, these contributions are very important for every country and they are still growing, according to counts of intellectual property applications. For example, in the years from 1990 to 1996 the number of patent applications rose by 27 percent in the United States and in Japan that increase was about 6 percent (Maskus, 2000a). Canada and Australia also experienced rapid growth, with a 29 percent rise for Canada and 59 percent in Australia (Maskus, 2000a).

The number of applications for trademarks and service marks during the same years experienced a significant increase too. In China, annual growth was the highest at 163 percent, followed by the United States, Canada, Australia, and Mexico. In the EU the growth in trademark filings was 10 percent.

Records of the number of copyrights being granted, however, are more complicated to collect because copyrights need not be registered. One way to figure out the importance of copyrights is to look for the number of publications and other outputs of creative activities that could reflect the demand for copyrights. Such an output that can serve as a measure of the popularity of copyrights is the number of book publications. From the year 1990 to 1996 the number of published titles rose in most of the countries mentioned. In the United States alone the increase of 42 percent was noted during those years (Maskus, 2000a).

2.4. Issues Related to IPRs

Intellectual property rights grant protection in legal frames for any creative activity, idea or new knowledge. IPRs were established to control the rights over knowledge and ideas and to sanction any illegal use and commercialisation. Similarly to any institution, it has two sides. On the one side; it protects and provides certain incentives for academics and researchers to undertake innovative research and any other creative activity, whilst on the other side; its increased control reduces the availability of new products and raises their price. With a growing global expansion and international trade this has become a central issue.

Technological advances have also raised new issues regarding intellectual property rights and their ability to protect new technologically advanced products. The questions were raised with

the development of computer software that were classified as artistic property and protected by copyrights. Protection through copyrights was possible because software was identified as a product of developer's thoughts and ideas put into program diction as a tangible expression. The problem regarding insufficient protection provided by copyrights was that computer software could be copied, without violating copyrights, only by rearranging the programming code. Because the design of computer chips and databases can easily be copied, developed countries started combining copyrights with the patent principle to provide better protection for these and similar goods but issues with databases being easily copied are still far from being sorted through some forms of IPRs (Maskus, 1993).

In general, laws and social norms are based on and develop from a collective behaviour that is characteristic for each culture. What is socially common in one culture does not mean that it is usual or even allowed in the other and these discrepancies between cultures and, in the end, countries make it difficult to impose unique laws and social norms that would be valid across the globe. The ones who promote universality say that people from all cultures would benefit from universal standards and the benefits would include health, education, and mobility but another issue is if imposing on one cultural group by another group would be ethical. This issue precedes the controversy over implementing universal intellectual property rights. Another issue is the difference between industrial and post-industrial countries, whose power continues to increase, and those less developed non-industrialised, which stagnate because they lack technological advancement. The industrialized nations are more developed, rich with capital and in need of human and raw material resources that can be found in less developed countries. As the disparities between these countries increase, there tend to be more resentment and negative attitudes towards the rich nations which do not contribute positively to the attempts at standardizing IPRs. Compliance with laws of IPRs is challenging the weaker nations to abandon some of their rights and accept imposed ones. This deepens further the separation between the North and South, in other words, between the rich and poor countries.

Supporters of the idea of conforming to IPRs build their arguments on the proposition that trademarks would promote development of new products, increase standards of product quality and variety, and in the end, benefit the society as a whole. Advocates of this idea mostly come from rich countries. Opposed to them there are antagonists of this idea that represent poor countries and argue that IPRs would impose costs and increase the power of

already powerful monopoly profits of some brands (Garmon, 2002). A study undertaken by Helpman (1993) showed that imposing tighter IPRs in less developed countries does not contribute to the economic growth, especially when foreign direct investment is absent because tighter IPRs adapt the trade terms in favour of the richer countries. After the initial increases in the innovation rate due to tighter IPRs, innovation began to decline. Helpman (1993) stated that investment in research and development in less developed countries does not bring sufficient results to provide significant profits and they are, obviously, worse off due to imposition of tighter IPRs.

These differences become more significant when richer countries start to benefit from tighter IPRs while the less developed ones are unable to imitate. The unequal terms of trade due to tighter IPRs contribute to further growth of richer and developed countries, while the less developed poorer countries lose.

The Western media, among them The Economist ("Trade Tripwires" 1994), work on promoting tight IPRs and suggest three advantages that should benefit developed countries after taking part in the agreement on Trade-Related Aspect of Intellectual Property (TRIPS). Signing the TRIPS Agreement members of the World Trade Organization (WTO) commit to implementing patents and copyrights. Patents with a duration of a minimum of 20 years and copyrights usually with a duration of 50 years. The development level of each country determines the deadline for the introduction of these laws. Usually, less developed countries have 5 years provided to make the needed changes toward implementing patents and copyrights, very poor countries have a 10 year term, while the rich ones should have it all done within a year. The advantage of TRIPS is that the western press – such as The Economist – advocate should benefit the developing countries threefold. The Economist ("Trade Tripwires" 1994) sees the first advantage for developing countries in a way that it provides them with a possibility to defend their own intellectual property. The second advantage that creates benefits for developing countries is the fact that without the TRIPS Agreement the United States would have left the Uruguay Round and that would result in developing countries losing other benefits from these negotiations. The third way developing countries can benefit from introducing TRIPS is that after their implementation, developed countries are going to be more confident in cooperating with poorer countries knowing that their intellectual property is now protected. Doing business with developing countries, opening plants and using their labour force are all helping developing countries to access new

technologies and know-how enabling knowledge spillovers into their countries by implementing IPR laws.

TRIPS, just as any other agreement, is not perfect and it still raises questions and doubts about its value – as some of the examples from recent history show. Such an example is the attempt in siding with big pharmaceutical companies, based in developed countries, which tried using TRIPS, to ban the export of cheaper medication for treating AIDS by developing countries. This example shows that TRIPS can be on the edge of ethical values and conflict with human well-being, benefiting only the developed countries. It is time, maybe, to rethink and reconstruct the concept of TRIPS Agreement to make it serve the well-being of all (Chang, 2001).

The view of IPRs may be significantly different from the point of less developed countries. If they are technologically weak they need to import everything that can help them come to a certain level of technological development and strong IPR protection could be seen as a stumbling block on their way to development. Another downside of the process is that piracy could provide domestic entrepreneurs a basis on which they can continue building which benefits national development. Another stimulus for economic and technological advancement is the increased availability of information across countries. These are the examples that show how governments should develop policies in the frame of short term solutions to meet the national and individual entrepreneurs' demands for fast progress. Time is an important factor in many fields that are protected by IPRs such as electronics in which after initial progress recent innovation can very soon become obsolete as new technologies develop and move forward. That is why fast and accurate adaptation at the national level is necessary to follow the trends and stay competitive. With the Uruguay Round in 1994 the legal protection through IPRs has become a part of the rules of international trade but the controversy over the purpose and value of IPRs to intellectual property was not terminated at that point.

The loudest advocates of IPRs are the United States, where IPRs have become an essential part of the trade policy and they are firmly convinced that IPRs benefit research, innovation, and other creative activity because they provide a creator or author with an appropriate reward. Because IPRs are the reason for their global competitiveness the U.S. works on

promoting and sponsoring IPRs through international organisations to make other countries employ new or strengthen existing IPRs (Garmon, 2002).

Various attitudes towards IPRs can be noted among countries across the globe. The industrialised countries are usually advocates for tighter IPR protection; while the less developed countries see IPRs even as a threat to their development. Amongst the advocates in recent times countries such as Mexico, Korea, and Turkey (Maskus, 1993) are seeing rapid progress in industry.

Situations involving IPRs still remain complicated since there are significant differences in the level of protection among countries across the world and they involve factors that are changing quickly and it is complicated to unify them.

In this era of global trade, the information economy takes a leading role. Everything that needs to be protected through IPRs is based on communication, from computers and related inventions to music works and literature works. In these fields, ownership represents the main concern. Other issues related to IPRs include social and cultural differences. Across the world, nations act and behave differently. These sorts of issues are actually nothing new, as we have witnessed them in the past. More powerful nations have ruled over the less powerful and imposing intellectual property rights could be seen as a new form of modern imperialism.

Even when analysing things in a simpler way another issue arises. As Garmon (2002) noticed, to what extent is innovation new and how much of it is original and can be attributed to the latest inventor?

3. IPRs and Economic Activity

One of the major goals of many economists and policy makers was to discover the reason why some countries are richer than others and why some of them are more developed than others. The answer lies in innovation and new knowledge that contribute to economic growth.

Advances in technology reflect the growth of an economy and the standard of living, so that countries should be interested in providing incentives for creative research. These incentives should be in the form of balanced IPRs that leave enough space for the circulation of new knowledge, and the protection and promotion of the innovation. Innovation itself is related to the costs of developing and its outcome is still not determined. There is a risk that if an innovation is valuable and can be easily copied, so that anyone could make use of it or sell it, it does not offer any incentive for researchers. If researchers would expect the situation to develop this way, they would not have any interest in innovating which would, in the end, hinder economic growth. This is where intellectual property rights step in and provide the author of an innovation with exclusive rights to distribute the idea and pay off the costs of research and development and possibly earn a profit. The downside of the concept of IPRs is that with its implementation the price of a good increases and its availability decreases. In contrast, less developed countries are concerned that overprotection of innovation could prevent the dissemination of new knowledge and hinder the industrial development (Maskus, 1993).

The idea behind promoting economic growth is to follow the practice of investing in research and development (R&D) and human capital. The rapid growth of some countries in the 1990s showed that investing in innovation paid off and this change has resulted in promoting the concept of intellectual property by some developed countries that were trading internationally, which further led to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), one of the World Trade Organization (WTO) agreements from the multilateral trade negotiations called the Uruguay Round (Idris, 2003).

After the signing of the TRIPS agreement, IPRs expected stronger regulation and protection on international level. Many theoretical views and predictions arose on how tighter IPR protection under TRIPS was going to affect economic activity, innovation, trade, or foreign

direct investment (FDI) and they were all ambiguous but according to the empirical evidence, although limited, the predicted effects seem to be positive overall.

3.1. IPRs and Economic Growth

Modern literature defines economic growth as a result of technological progress. The literature also states that technological progress can be achieved through investment in R&D and the resulting innovation, which contributes to an increase in the stock of knowledge. Thus, it can be said that IPRs can assist in increasing economic growth because IPRs encourage both innovation and the development of society's stock of knowledge (Falvey et al, 2006).

When exploring the impacts of IPRs the world gets divided into two parts; the developed countries "North" and the developing countries "South". The main questions in analysing the South and North and the impact of stronger IPR protection on them are whether the stronger IPRs would increase;

- The global rate of growth
- Technology transfer rate from North to South and
- the standard of living both in the North and South.

The research analysis has shown that the impact of stronger IPR protection in the South always benefit the North but the South shows positive impacts only if R&D is greatly productive, so that it helps to decrease the costs, and when the South occupy a significant share of the market of the particular good. The additional profits from the creation of monopoly in the South, under the circumstances mentioned in the previous sentence, create the incentive to invest in northern R&D, whilst the standard of living in the South develops further by benefiting from greater consumption achieved through R&D in the North (Falvey et al, 2006).

Further research has also shown that with time these benefits from strengthening IPR protection diminish and due to the creation of opportunities for monopolistic behaviour eventually it can lead to a decrease in the standard of living especially in the countries that do not invest in R&D (Falvey et al, 2006).

Recent research shows that there is competition for scarce resources between R&D and the development of new goods and improvement of existing goods based on earlier innovation. Technology is transferred to other countries through several channels, that will be elaborated on further in this chapter, but if the observation follows the simplest case of trade in goods it can be shown that the South can achieve competitive advantage through imitation which will then decrease if stronger IPRs are employed. This results in the increase of northern innovation but only in the short run.

In the long run, northern innovation is expected to decrease due to resource scarcity. Strengthening IPR protection in the South could then lead to a decrease in overall growth (Falvey et al, 2006).

Econometric theory suggests that the effects of IPRs are ambiguous and they can have positive and negative impacts on economic growth. The empirical evidence presented, although limited, suggests that this relationship is positive though highly dependable on different circumstances and conditions. Briefly, IPRs present a strong market-based tool for knowledge creation and circulation if used properly and set up as a part of a coherent and consistent set of complimentary policies (Maskus, 2000b).

3.2. IPRs and Innovation

The crucial argument for advocates of stronger IPRs is that they provide creators with well-deserved benefits for their creation, encouraged investment in R&D that results in innovation and, in the end, an increase of economic growth. As a measure of the investment in innovation, R&D expenditure can be used and patent application can serve for output measurement, although there are divided opinions about patents being an appropriate reflection of returns in R&D (Falvey et al, 2006).

Chen and Puttitanun (2005) conducted an empirical and theoretical research on IPRs and innovation in developing countries and presented their conclusions in a recent paper. Using the panel data set that included 64 developing countries (over the years 1975-2000) they empirically evaluated the results that showed that the protection of IPRs has a positive impact on innovation in developing countries. Their research also confirmed the presence of U-shaped relationship between IPRs and country's levels of economic development, meaning

that this positive impact of IPRs on innovation is stronger in countries with higher levels of development. Although, in the literature, attitudes can be found that say that only developed countries could benefit from IPR protection in the developing countries, this paper suggest a different view and benefits for developing countries, not only the narrow view of increasing innovation. They suggest that interests in promoting stronger IPRs in developing countries should be mutual because both sides North and South are gaining from them (Chen, Y. and T. Puttitanun, 2005).

Similar research conducted by Schneider (2005) examined the impact of IPRs and FDI in the process of increasing innovation and economic growth under the influence of high-technology trade. The results regarding the impact of IPRs are rather interesting and differ from some previous research, mentioned above. The paper states that IPR does affect innovation positively in developed countries but that they can affect innovation in developing countries rather negatively. The conclusion taken from these results is that stronger IPRs protect foreign firms but damages domestic firms.

3.3. IPRs and Trade

Falvey et al (2006) present Coe, Helpman and Hoffmaister's (1997) identification of four channels that make the knowledge transmission from one country possible and that can have an impact on productivity and economic growth in another country to which the goods are imported. As the first channel they state importation of intermediate and capital goods and that should increase the productivity. Second is the cross-border learning of production methods and designs, organisational structures and market conditions, which are supposed to help in better allocating local resources more efficiently. Third is the imitation of new products and fourth is the development or imitation of new or foreign technologies. Coe, Helpman and Hoffmaister have expanded their research on North-South knowledge spillovers and they have discovered that the spillovers from North to South are channelled mostly through imports and that they have an essential positive impact on growth.

Maskus (2000b) in his paper attempts to identify the impact of IPR on international trade and discusses the issues that make this complicated. He argues that the effects of patent strength are included in the trading price of the good and cannot be observed separately. In addition, exporting may not be the only option, with FDI and licensing being other possible. Stronger

IPRs may affect the choice among alternative channels. The third problem is the creation of market power due to stronger IPRs which indicates that market structure is also important when observing the impacts.

Falvey et al (2006) present two direct effects of IPR protection on international trade that seem to be essential. One side emphasizes the importance of exporting a firm's patented goods accompanied by strong IPR protection to prevent piracy, in order not to damage the export's profitability. On the other side stronger IPRs could discourage imitation among local firms and encourage foreign firms to monopolistic behaviour by providing them with market power. Maskus (2000b) notes that these effects can be moderated although loss of market power of the innovative firms need not to be a consequence of the weak IPRs because it takes time and capital to initiate the imitation among local firms. Also, market power and monopolistic behaviour do not need to be a circumstance of strong IPRs since the legitimate alternatives are available.

Suggestions from the above discussion would be that the impact of IPRs on trade is greatly dependable on the levels of country's development and the ability to imitate advanced technology. Thus, in a country where the level of ability to imitate is high, it is more likely that stronger IPRs would lead to market power, whilst in countries where the level of capacity of imitating from the exporting country is lower, tight IPRs may encourage exporters from advanced countries to trade by ensuring the protection for their patented goods (Falvey et al, 2006).

Due to ambiguous theoretical views about the impact of IPRs on trade many empirical studies have been conducted which, in a way, confirm the theoretical views and suggest that tighter IPRs can have a significantly positive impact on trade but not necessarily in all industries, especially in those technology advanced. Taking remarks from the available empirical literature, Fink and Maskus (2005) argue that the strength of IPRs in a developing country does not significantly impact transnational firms' decision on where to export. They also suggest that in middle-income developing countries the capacity to imitate is higher, thus, stronger IPR protection is needed in order to encourage transnational firms to export there. Another argument used is that products in high-tech industries are more complex and difficult to imitate, thus, high-tech industries seem to be more resistant to changes in IPR protection. Also many transnational firms choose FDI or licensing as a channel of technology diffusion,

so that the level of IPRs concerning export does not affect these firms. Overall an increase in imports of high-tech products, due to tighter IPRs, may also contribute to an increase in imports of low-tech goods and, in the end, it may diminish imitation.

Any significant change in IPRs can greatly affect international trade. Theoretically, these effects are ambiguous. A study conducted by Maskus and Penubarti (1995) has explored this issue in more depth. In their study, they observed international trade between OECD countries and developing countries in 1984. They included measures such as trade protection and market size to an already existing index of patent strength. The results of this study showed that a tighter patent protection results in an increase of trade. This result was less significant in less developed countries with smaller income promoting market power, whilst the same effect showed to be much more significant in developed countries resulting in trade expansion and in displacing the local violators of patent rights. This study provides evidence that stronger IPRs in terms of the TRIPS agreement do have a positive effect on trade with goods and services.

Fink and Primo Barga (2005) have confirmed these findings in their own paper and additionally provided new evidence on the impacts of stronger IPRs on trade. The results of their research suggest a positive effect of IPRs on international trade for the aggregate of non-fuel trade, although this positive link between IPRs and trade flows did not show to be significant for high-technology trade.

In a similar research on the effects of IPR protection on exports Smith (1999) found that stronger IPRs had a positive effect on exports to countries with strong threat of imitation and a negative impact on exports to countries with weak threat of imitation. Smith (1999) focuses on the United States as an exporter and suggests that in this case exports highly depend on IPR protection in importing countries. Whether the relationship between IPR protection and exports is positive or negative, depends on the threat of imitation in the importing country.

3.4. IPRs and FDI

In the recent literature, technology diffusion is considered to be an important factor impacting economic growth. Thus, economic growth in developing countries can be explained through their ability of “catching-up” in ways of adaptation and implementation of new technologies

that leading countries already use. One of the channels through which such technological spillover can be achieved is foreign direct investment (FDI) by multinational corporations (Borensztein et al. 1998:16). Borensztein et al (1998) examined the impact of technology diffusion of economic growth in developing countries and found that FDI positively affects economic growth, although significantly so in countries that attained the threshold educational level only.

All over the world governments strive to bring foreign direct investment to their countries in order to benefit from new technologies, know-how, and organizational structures that would flow in to the country. For them to achieve that, it is necessary for the governments to understand the factors and their impacts of IPRs on FDI (Smarzynska, 2002).

FDI usually occurs in industries based on knowledge technology. The reason why this is so is because technology is considered a public good within a firm and it can easily be transferred to another country and used in many places without fear of becoming a scarce good. Market size, availability of resources, distance and cost of production are factors that influence the transnational firm's decision on investment location. In the literature, it is suggested that FDI is the most appropriate channel of technology diffusion across borders because the technology stays within the firm and decreases the fear of technology diffusion within the host country (Falvey et al, 2006).

Empirical evidence on the relationship between FDI and technology diffusion varies and the general conclusion is that it does not provide much evidence on the impact on both groups developed and developing countries separately.

Glass and Saggi (2002) have developed a product cycle model with endogenous innovation, imitation, and FDI in order to determine the impact of stronger IPRs in the South on innovation, imitation, and FDI. Their research shows that stronger IPRs in the South do not protect transnational firms from imitation though it does in contrast protect northern firms. By raising the costs of imitation stronger IPRs also force domestic firms to invest more in order to imitate successfully. The scarce resources in the South that are being used for imitation reduce FDI and the resources used for production in the North leaving less resources that can be used for innovation, thereby reducing it.

Görg and Greenway (2003) have reviewed some of the theoretical and empirical evidence on FDI spillovers. Theory suggests why the spillovers from FDI may occur but not much of the empirical research found positive impacts of FDI on domestic productivity. Although studies that made a further disaggregation of the data into homogeneous groups of firms have found that firms with higher levels of absorptive ability and/or located closer to the transnational firm are provided with benefits.

The literature and the empirical evidence do not provide us with unambiguous conclusions on the relationship between FDI and IPRs. It is well known that transnational firms will choose FDI over licensing and joint venture if their products are highly differentiated and technology advanced and if the licensing costs are high. Under these circumstances, stronger IPRs could increase the extent of licensing and joint venture and, in the same time, decrease the use of FDI. Although some literature argues that weak IPRs tend to discourage FDI. Across sectors the influence and importance of IPRs vary. For instance, technologies that are very difficult to imitate do not require much attention on IPR protection, whilst low-tech industries, where for products that are easy to imitate, much more attention is paid on the strength of IPRs. Despite these theoretical arguments the practice has shown that sometimes these arguments do not present the necessary move for investing in a foreign country (UNIDO, 2006).

To sum up; the evidence, although mixed, indicates that FDI is an important channel of technology diffusion in countries with high levels of absorptive ability. Although the evidence on the relationship between FDI and IPR protection is ambiguous, it is found that stronger IPRs encourage FDI in low-tech industries whilst IPRs are not expected to be significant in high-tech industries where goods are not easily copied (UNIDO, 2006).

3.5. IPRs and Licensing

The relationship between licensing and IPR protection seems to be more complex due to many kinds of licensing agreements that may exist. The licensing agreements can be made between a firm, a joint venture or unaffiliated firms comprising within the agreement technical assistance, codified knowledge, know-how and IPR protection. The agreement is based on a fixed fee, royalty schedule or profit share offering the possibility of legitimate production or distribution of the product for a period of time in a specific geographical location (UNIDO, 2006).

As already stated in the previous section, firms that operate in high-tech industries produce differentiated goods and if confronted with high licensing costs tend to choose FDI over licensing. In these cases, FDI is more appropriate since it provides the opportunity to internalize the costs of transferring technology. Regarding the relationship between IPRs and licensing, it is evident that stronger IPRs would positively affect licensing by reducing the costs for the licensor and expanding the protection of proprietary information within the contract. Stronger IPRs set the legal frames to the licensee's behaviour and terms for monitoring. Tightening of IPRs also contributes to the increase of rents, since in this case, the licensor is better protected and need not offer profit sharing to prevent imitation. On the other hand, the stronger IPRs provide the possibility of monopoly creation by the licensor by giving him a greater market power and this could reduce innovation, and in the end, reduce licensing (UNIDO, 2006).

There is not much empirical evidence on the relationship between IPR protection and licensing. In his study on relationship of FDI and IPRs in the United States, Mansfield (1994) noted that firms do not tend to transfer technologies to unaffiliated firms located in countries where IPR protection is weak.

3.6. IPRs and Patenting

Falvey et al (2006) note the findings of Eaton and Kortum (1996) who stated that foreign patents are attracted by countries with tighter IPRs. They also found that foreign patenting was positively related to productivity growth, with the exception of countries such as France, Germany, Japan, United Kingdom, and United States who are major innovators. Falvey et al (2006) find that foreign patenting has a positive effect on productivity growth, which is consistent with research mentioned above (Eaton and Kortum). but no significant effects of foreign patenting on growth could be found in countries with stronger IPR protection. This finding suggests that excessively strong IPRs could hinder the diffusion of knowledge through foreign patenting. Another finding from this research states that only countries where the level of ability to imitate is low and those with a high capacity to innovate do not seem to profit from patenting. Unlike them, countries more open to the international trading seem to benefit more, although unexpectedly. The results also suggest that foreign patenting affects

small countries positively as well as medium-sized countries, whilst in the largest countries there is no statistical impact of foreign patenting on growth.

Overall, the research findings suggest that there is a positive relationship between foreign patenting and growth in developing countries where IPRs are at the highest levels. Thus, it can be said that stronger IPRs in developing countries can induce the diffusion of technology. Similarly, in countries where IPRs are at the lowest levels a negative impact of patenting on growth can be noted. According to these findings it can be stated that foreign patenting can destructively affect growth in developing countries with low levels of capability for imitation, small markets and low market openness. This finding is consistent with the previous literature which points out how market power effects can affect small countries with uncompetitive, small and isolated markets. In contrast, larger, in more open and more developed countries the diffusion of technology through foreign patenting has positive impacts on growth (Falvey et al, 2006).

4. Development of Intellectual Property Rights in the Republic of Croatia

4.2 The Aim and Goals of the National Strategy

The National Strategy is a system that has been moulded to echo the conclusions and concerns raised by those in positions regarding intellectual property matters. The State Intellectual Property Office (SIPO) and the Community Assistance for Reconstruction, Development and Stabilisation (CARDS) were the two main runners in the research conducted to create a successful National Strategy of the Republic of Croatia (2005-2010) that would improve the;

“investment climate and the stimulation of economic, scientific and cultural development by providing a reliable and stimulating system of protection of intellectual property rights through the improvement of the legal, institutional and program framework for the effective protection, maintenance, exercise/enforcement and use/exploitation of intellectual property.” (SIPO, 2006: 11)

The State Intellectual Property Office was founded on December 31st 1991 and has been the highest institution among government authorities for issues regarding the protection of intellectual property in the Republic of Croatia since. SIPO is primarily concerned with the necessary procedures for granting patents, trademarks, industrial designs, and geographical indications but also participates actively in drafting laws and regulations and organizes seminars in order to promote the issues related to IPRs (Katulić, 2006).

Owing to the involvement of these and other related groups that are concerned with offering a solid foundation on which to build the country's economic and social situation, the overall aim of such a strategy was to adapt, protect and improve the use of national intellectual property. In the case of the Republic of Croatia, the government introduced specific aims regarding what they hoped to achieve by implementing the National Strategy. These were structured loosely around the broad aims of the strategy, which are unique to the country's situation. These aims used the European Community as a contrasting and paralleling aspect to introduce objectives that would strengthen the country economically and socially. What the government hoped to achieve, by the end of 2005, was a guarantee that the standard of intellectual property protection would be similar to other European countries and that the maintenance of such would adhere to the *“international obligations and agreements*

concluded by the Republic of Croatia in this field.” (SIPO, 2006: 15) In addition to this, from the year 2006 to 2007 the aim of the national strategy was to fully understand the potential of intellectual property as an influential factor regarding the economy and its role in the scientific, cultural and social spheres of the Republic of Croatia. By the end of 2010, the government aimed to use the national strategy to strengthen the social situation to such an extent that it would be on par with average ranking countries in the European Union, including Ireland, Portugal and Austria, or ambitiously the highest ranking countries including Finland, Sweden and Denmark who are known for their leading European creativity index statistics (ECI). The strategy as a whole also aimed to cover all levels of intellectual property within these objectives. This consists of the *“micro-level – individual researcher/inventor, designer, author, performer, craftsman, etc.; the mezzo level – institute/enterprise/institution and the macro level - national economy.”* (SIPO, 2006: 15)

In order to reach these objectives successfully certain goals were put in place to assist the process. With the *acquis communautaire* as a guideline, the legislation framework would have to adhere to the international legal order regarding intellectual property rights. More specifically, the national strategy of intellectual property would have to be drafted to suit two important aspects. These included the noting of the modernisation of many methods and procedures within the business field as well as observing the development in the form of organisation and management witnessed within business - this includes the *“employment and development of human resources and equipment”* (SIPO, 2006: 16), and the cooperation between institutions that have intellectual property as a priority. Just as the aforementioned aim stated, another goal was to realise the full role of intellectual property as an economic tool that could strengthen business, social aspects as well as technology output by the Republic of Croatia. A significant goal was one that focused on ensuring the public was made aware of the value of intellectual property, thus lowering the infringement rate whilst simultaneously developing an interest in the field by expanding activities associated with it.

4.2 Development of the Intellectual Property System

Having laid out the expectations of the National Strategy and how the intellectual property system could prosper from such an approach, the development of the latter began. In the structuring of the national intellectual property system (NIPS) legislation and institutional

frameworks had to be introduced in order to set the system in a concrete base. These would be created with both economic and social impacts in mind.

4.2.1 Starting Point

The NIPS that was evident in the Republic of Croatia before the national strategy of 2005-2010 had certain factors that were a useful starting point for the project. These included both international and national laws and regulations on intellectual property and the management of copyright and related rights.

The international laws concerning intellectual property rights were monitored by specific organisations and/or countries that assisted with the drafting and enforcing of regulations. The World Intellectual Property Organisation (WIPO) - under the United Nations (UN) - was one of these monitoring parties that agreed on conventions and treaties to which the Republic of Croatia had to adhere. This is made up of a complicated number of documents that create the international legal order surrounding intellectual property. The question of what obligations need to be followed when enforcing NIPS laws were answered by the World Trade Organisation agreement on Trade Related Intellectual Property (WTO-TRIPS). The WTO's agreement thus gave a template on how the NIPS should function. The Republic of Croatia was expected to fulfil these obligations and did so by the beginning of 2003. The EU had obvious involvement regarding the implementation of the NIPS within the Republic of Croatia as trade between European countries is a matter which they monitor often. In addition to this the Republic of Croatia wished to be accepted into the EU and a requirement evident in the Interim Agreement on Trade and Related Matters states that there must be a guaranteed *“level of protection of intellectual property rights similar to that in the EU, within three years from the date of its entry into force, i.e. up to March 2005.”* (SIPO, 2006: 19). A significant country that had legal standings with the Republic of Croatia on this point was the United States of America. A Memorandum of Understanding between these two countries was signed in 1998 and all relevant regulations were corrected to suit the new situation regarding TRIPS.

With regards to national laws surrounding this subject, the Republic of Croatia had certain regulations in place before the introduction of the National Strategy. These refer to and regulate NIPS in or associated with the Republic of Croatia. There were six laws in place that had been in practice since 2003. These included Patent Law, Trademarks Law, Law on

Geographical Indications and Designations of Origin of Products and Services, Law on the Protection of the Topographies of Semiconductor Products, Industrial Designs Law and Copyright and Related Rights Law. Of these, the Croatian Copyright and Related Rights Law was concerned with protecting artistic and literary works and performers.

“Croatia has adhered to the Berne Convention for the protection of literary and artistic works, and the Rome Convention on the protection of performers, producers and phonogram and broadcasting organisations, with three reservations to the Rome Convention.”(Screening, 2006: 3).

In terms of protection, the NIPS in place had a copyright that was valid 70 years after the author’s death. Regulations that were evident included Patent Regulations, Trademark Regulations, Regulations on Geographical Indications and Designations of Origin, Regulations on the Protection of Topographies of Semiconductor Products, Regulations on Industrial Designs and Regulations on the Professional Criteria and Procedures for Granting Authorizations for Performing Collective Management of Rights and on Remunerations for the work done by the Council of Experts. These were all introduced in 2004 and assisted in reinforcing the laws mentioned above. Having these strong laws and regulations in place provided the National Strategy with an excellent starting point to introduce the development of the amended NIPS.

The managing of copyright and related rights was done either individually or collectively. If the process involved the individual use of another’s copyright work and a contract then the protection of such would be handled by either the holder of the copyright or with the use of a representative. However,

“The tasks [have] to be performed by an authorized representative [and] may be performed by an attorney-at-law, a legal person specialized for the management of copyright and related rights (the Croatian Authors’ Agency), and collective management associations, on the basis of individual powers of attorney.”(SIPO, 2006: 25)

This proved difficult at times as there was a need for more individuals to be practiced in the kind of law specialisation required here. Conversely, if the situation involved a collective unit then the procedure differed. The association of right holders only have the power to manage the copyright protection in this degree and were to be authorised by SIPO. This was granted

to only one association for a particular set of rights and is done so using criteria that were drafted beforehand. For example, the question of authors' copyright protection would be handled by the Croatian Composers' Society (CCS). Similarly, the Croatian Association for the Protection of Performers' Rights (CAPPR) would do so for the performers, the Croatian Phonographic Association (CPA) for the producers of phonograms, and the Croatian Film Director's Guild (CFDG) for film directors, screenwriters, cameramen and film producers. (SIPO, 2006)

4.2.2. Legislation Framework

In order for the development of the adapted NIPS to take place, a development of the legislation framework had to occur first. This had to be built around EU regulations as well as international laws concerning intellectual property. Particular acts brought forward in both 2004 and 2005 resulted in the Republic of Croatia having a satisfactory legislation - according to EU standards.

However, what was noticed was that there were a few issues that needed to be resolved in order to reach the full potential of the intellectual property rights legislation framework. This included how the legislation would be enforced as seen in the Screening Report of 2007;

“The essential provisions concerning enforcement exist in the Croatian legislation. In order to reach a level comparable to enforcement in the EU, the National Strategy for the development of the intellectual property system foresees improvement to legislation and its implementation.” (Screening, 2006: 11)

Certain organisations and parties then had the responsibility of amending certain basic laws that were already in place as well as introducing ones that would complement these and intellectual property rights. SIPO, (MSES), the Ministry of Finance (MFIN), the Ministry of the Economy, Labour and Entrepreneurship (MELE), the Ministry of Agriculture, Forestry and Water Management (MAFWM) and the Ministry of Justice (MJ) - all for the Republic of Croatia - are the parties that were involved in the amendment of the legislation for their particular field. MJ even went as far as to amend the Courts Law and the Courts' Seat Law to ensure that intellectual property rights cases were concentrated in fewer courts. (SIPO, 2006)

“The work of these coordination bodies, and the accompanying expert working groups resulted in further improvement of the statistical monitoring of the infringements of intellectual property rights in Croatia, as well as the preparation of

the joint communication strategy for raising public awareness about the respect for and enforcement of intellectual property.”(SIPO, 2010: 1)

4.2.3. Institutional Framework

A number of institutions had to be amended in order for the new NIPS to effectively be implemented. The Croatian government was to see to it that each of the institutions that needed improvement successfully did so.

SIPO, although responsible for many issues regarding NIPS before the National Strategy 2005-2010 was put forward, required some attention in terms of what could be improved. Certain strategies were drafted in order to assist the government in ensuring these improvements were adhered to. SIPO's responsibilities were significantly increased to cover a lot of ground concerning the NIPS new role in the economic and social spheres of the country. The collection, process and explanation of NIPS to the public were responsibilities that SIPO had to accept under the improvements of institutions. Other responsibilities included efficiently granting industrial property rights, developing its own resources in order to fulfil its responsibilities with ease, enforcing copyright and related rights and being modernised to the best of its ability. SIPO was also expected to prepare 5-year development plans for a number of sectors in order to ensure the smooth running of NIPS. In addition to this all these responsibilities were to be constantly managed and updated so as to prevent major faults in the future.

MFIN, an institution that is also vital in the handling of intellectual property rights, would also have to be altered to suit the amended NIPS. In particular the Customs Administration (CA), a sub-section of the MFIN, would take on new responsibilities to complement the new system. Working closely with the SIPO, the CA would handle infringements carefully and effectively provide technology and equipment to ensure that the trading of goods could be monitored efficiently over borders. Equipment and such would also be provided for the Police and State Inspector as these institutions would work together for the success of the NIPS. The role, therefore, of the MFIN would be to assist other departments and institutions more so than to improve anything as an individual party.

The MJ is obviously important in this area as it provides the project with a legal binding force. The State Attorney's Office (SAO) is directly related to this institution and would then have been treated with the same improvements. As opposed to having the infringements of NIPS dealt with amongst many spheres of the judicial system, the improvement made was that four Municipal and Commercial Courts - Zagreb, Rijeka, Split and Osijek - would deal with such issues specifically instead. This would concentrate the solving of issues to a particular sector and thus make it more efficient. State Attorneys then became actively involved in the training system of the National Strategy as well as the collecting of information for the public just as the SIPO was required to do.

The police were also given specific instructions when dealing with NIPS infringements. In a statement evident in the National Strategy for the Development of Intellectual Property Rights in the Republic of Croatia 2005-2010;

"The Croatian Government has supported additional adequate training and procurement of equipment, which is at present insufficient, particularly as regards IT equipment and infrastructure, for the Police to be able to fully enforce intellectual property rights in the scope of its activities." (SIPO, 2006: 40)

This suggests that the police were seen as a priority when it came to successfully implementing NIPS and thus the improvement of the institution would effectively improve the running of the amended NIPS. Education on the topic of pirated and counterfeited goods was also introduced to ensure that there was adequate awareness about the topic. The public was also made aware of such information but this is discussed and elaborated on at a later stage.

4.3 Cooperation and Projects

The National Strategy highlighted plans for the period 2005-2010 in order to successfully implement the NIPS of the Republic of Croatia. By 2010 most of these plans had been carried out and completed. This made room for more improvements and developments to be introduced and implemented during the 2010 period itself. This was done through a variety of different projects as well as with the cooperation from a multitude of organisations both on a national and international scale.

4.3.1. National Cooperation

As mentioned previously, the government aimed to improve specific national organisations and institutions in order to ensure the smooth running of the NIPS. In 2010 these same organisations and institutions were once again targeted as candidates for improvement. This *“was established by mid-2010. This mechanism includes multilevel formal coordination bodies for the performance of the tasks and activities related to the enforcement of intellectual property rights between Office, the Ministry of Justice, the State Attorney’s Office and the Ministry of the Interior, the State Inspectorate and the Customs Administration.”* (SIPO, 2010: 21).

In addition to these organisations and institutions, a number of other national bodies were established in 2010 with the intention of being useful to the amended NIPS. These included; a) the Steering Committee for the Enforcement of Intellectual Property Rights - an organisation consisting of high officials from state administration bodies that manages all infringements against intellectual property rights and makes attempts at decreasing these very infringements, b) the Coordination Board for the Enforcement of Intellectual Property Rights - an organisation consisting of managerial civil servants from state administration bodies that focuses on executively dealing with infringements against intellectual property rights, c) Operational Group for the Enforcement of Intellectual Property Rights - an organisation consisting of officers from the Ministry of the Interior, the State Inspectorate and the Customs Administration that deals with the implementation of the NIPS and infringements thereof, and d) the Group for the Cooperation with the Holders of Intellectual Property Rights - an organisation concerned with dealing with infringements on a consultative level between the representatives of the right holders and members of state administration bodies (SIPO, 2010). All these permanent bodies were required to publish all infringements made throughout 2010 and make them available to the public. This was regularly done so and received a positive response. Other activities included the encouragement of intellectual property rights research within business and social spheres. Academic organisations cooperated efficiently to encourage entrepreneurial opportunities that involved the NIPS and its impacts on the country’s economic environment. Public awareness of the NIPS was also something these particular bodies handled and organised.

4.3.2. International Cooperation

In order to successfully implement the NIPS, the Republic of Croatia required the assistance of international organisations, bodies and communities in addition to their national cooperative force. Although the European Union, and its respective projects was one that had been involved with the amended NIPS from the start, bilateral and multilateral cooperation was lacking within this sphere. This led to their involvement in the development of the NIPS in the Republic of Croatia during 2010.

Specific conventions and agreements relating to intellectual property rights at the international level as mentioned in the National Strategy of 2010 include the;

- a) Convention Establishing the World Intellectual Property Organization (WIPO Convention, 1967, as amended 1979)
- b) Agreement on Trade Related Aspects of Intellectual Property Rights (WTO TRIPS Agreement) (SIPO, 2006).

4.3.2.1. European Union Assistance Projects

Intellectual property rights concept within the EU is not a systematically arranged system, instead there are number of directives, regulations and recommendations directed to establish and preserve the concept of an internal market. In the process of joining the European Union, the Republic of Croatia is implementing changes to the law that will have an essential impact on the business community. These changes are necessary to meet the standards of the European Union and to be competitive in the European Union and the global market. The Ministry of Economy, Labour and Entrepreneurship is aware that legislative changes could create difficulties for Croatian companies and that they should provide information to help business comply with new regulations and standards, which can be easily achieved in co-operation with the EU and its projects (DZIV, 2009).

In 2008 two projects, initiated between the European Union and the Republic of Croatia regarding the NIPS, were introduced. One of these was the project PHARE 2006 - Strengthening the Enforcement of Intellectual Property Rights. As the name suggests, this project focused specifically on the enforcement of the NIPS through the professional training of their authoritative forces. This was done so through the direct cooperation of the Danish patent and trademark office and SIPO. Funds for technical equipment as well as professional technical assistance were brought forth through this project and assisted greatly in the

cooperation and efficiency of particular NIPS authoritative bodies including the Ministry of the Interior, the Ministry of Justice, the Customs Administration and the State Inspectorate. This project was finalised in 2010 and saw a positive result in the way that the relevant bodies communicated and handled all intellectual property rights enforcement strategies and infringements. The second project was the IPA – Regional Programme on Industrial and Intellectual Property Rights in the Western Balkans and Turkey. Unlike PHARE, the IPA funded technical assistance requests from the beneficiary countries that specifically asked for it. Along with 7 other beneficiary countries, the Republic of Croatia received funds for the development of technical assistance within the field of intellectual property rights by the EU judging by a frame of priorities that had been pre-drafted. Through this project the Republic of Croatia was successful in; the full collection of national patent documents in a digitised format, the introduction of an electronic filing system for the applications for the protection of patents, trademarks and industrial designs, conducting research on machinery that could potentially aid in the translation of English patent documents to Croatian and vice versa, conducting research on a potential analytical system for promising intellectual property in enterprises and the start of a formal system that would deal with quality control in industrial property rights (SIPO, 2010).

4.3.2.2. Bilateral Cooperation

These projects initiated by the European Union were then spread to other countries, encouraging the cooperation of other organisations within Europe with the Republic of Croatia. Employees of intellectual property offices were sent to these countries to analyse and expand the enforcement of NIPS in the Republic of Croatia. Cooperation agreements for this endeavour were finalised in 2010 with; the Intellectual Property Office of Montenegro, the Office for Industrial Property of the Republic of Kosovo and with the State Office for Industrial Property of the Republic of Macedonia. Results from these cooperation agreements were largely positive as they allowed for Croatian institutions to form a concrete process of monitoring infringements of the NIPS as well as to better coordinate the transference of these infringements to the respective authoritative bodies. What was better understood by the Croatian NIPS office was how to correctly develop institutional capacities within the country. Similarly, representatives from the Intellectual Property Office of Monte Negro as well as those from the State Office for Industrial Property of the Republic of Macedonia were given access to Croatian patent laws and the opportunity to familiarise themselves with the

protection and management of copyright and related rights as a system in the country. Just as they did so in the Republic of Croatia, the European Union also provided technical assistance to the Intellectual Property Office of Monte Negro and the Office for Industrial Property of the Republic of Kosovo in 2010. It was here that SIPO assisted with the technical aid projects related to the NIPS sent to these offices (SIPO, 2010).

In addition to this, cooperation between a number of countries within Europe and the Republic of Croatia was strengthened through the formation of a group of offices consisting of the Czech Republic, Hungary, Slovakia, Poland, Austria, Croatia, Slovenia and Romania. This group dealt specifically with issues regarding NIPS within each respective country as well as Europe as a whole. What was discussed at meetings was how the protection of intellectual property rights was being handled as well as how international intellectual property organisations operated in contrast to European ones. Information on national projects regarding NIPS was also shared at these meetings. After a successful conference in 2010, it was decided that the group should meet twice a year from then on to discuss intellectual property rights improvements and downfalls and suggest solutions to particular issues. Further cooperation was also agreed upon in the year 2010. This was with the Danish patent and trademark office, where Strengthening the Enforcement of Intellectual Property Rights, within the PHARE 2006 programme was introduced and implemented (SIPO, 2010).

4.3.2.3. Multilateral Cooperation

At a multilateral cooperative level specific organisations were involved in the smooth-running of the NIPS especially during the year 2010. The organisations that were most vital in ensuring that the NIPS of the Republic of Croatia were successful in their enforcement and protection were; the World Intellectual Property Organisations (WIPO), the European Patent Organisation (EPO) and the Office for Harmonisation in the Internal Market (OHIM). (SIPO: 2010)

The WIPO had long participated in the subject of intellectual property rights with the Republic of Croatia through specific projects. The WIPO Worldwide Academy together with the University of Dubrovnik held the third WIPO Summer School of Intellectual Property in Croatia in 2010. This obviously benefited the system by providing it with a formal educational background to ensure complete knowledge of the subject by members within

authoritative bodies. What was also seen in 2010 was the focus of intellectual property rights within advertising and the WIPO's role in establishing a WIPO specific to the Republic of Croatia through their learning course that was held for employees that year (SIPO, 2010).

The EPO was also an organisation that had been participating greatly in the Republic of Croatia's mission to form a successful NIPS. This participation was greatly increased in the year 2010 when the EPO and the Croatian intellectual property office signed a vital cooperation agreement, the first between these two parties to be exact - the National Action Plan of cooperation. This is based on programmes decided upon by the member states and is thus open for participation from all members. The Republic of Croatia receives co-financing from the EPO budget for its cooperation programmes as it has a low number of patents per individual within the country. There are 5 cooperation programmes concerning the NIPS which were implemented in 2010 that still function today. These are namely; institutional strengthening (P02), patent awareness events and materials (P03); EPTOS (patent administration - P11) and EPTOS eOLF (patent information - (electronic filing of applications) - P10) and national IP forum (P13) (SIPO, 2010). The most successful programme of 2010 was the institutional strengthening sphere. Within this programme, employees of the intellectual property office of the Republic of Croatia participated in a number of training and professional development programmes organised by the EPO. In addition to this, the NAP project allowed for the intellectual property office of the Republic of Croatia to prepare and publish several publications concerning intellectual property rights. Concerns and issues relating to intellectual property rights under the amendments to the European Patent Convention - in particular to the subject of patent protection in the field of pharmacy - were raised in two public events in Zagreb. This ensured that problems were dealt with in a timely fashion and made sure the NIPS ran efficiently.

The OHIM worked in a similar way to the other organisations in that it dealt closely with the EU Member States in the programmes that it provided. The OHIM focused specifically on trademarks and industrial designs and the training of employees to fit a professional description in these two fields.

4.3.3. Industrial Property Protection

“In the field of industrial property rights, the acquis sets out harmonised rules for the legal protection of trademarks and designs, as well as a partially harmonised regime for patents. These include conditions for compulsory patent licensing. An important element of the EU-wide patent system is the accession to the European Patent Convention and European Patent Organisation.” (Screening, 2007: 2)

By the year 2010, the overall amount of industrial property protection applications had dropped from 15329 in 2006 to 9235 (SIPO, 2010). This has largely to do with the fact that industrial property protection within the Republic of Croatia is an expensive endeavour. This is especially true if one is looking to protect a number of intellectual property items within the business.

4.3.3.1. Patents

“Patents are granted for 20 years, to any invention in any field of technology which involves an inventive step and is susceptible to industrial applications. Consensual patents' duration is limited to 10 years. Opposition to granting the consensual patent may be filed by any interested person within six months from the publication. There are limitations provided, as well as the exceptions to the exclusive rights. A request for nullification of the patent may be introduced by a State Attorney, a legal or physical person if the conditions for its release were not fulfilled.” (Screening, 2007: 6)

Just as the overall amount of industrial property protection applications had decreased from the previous years, so did the amount of patent applications. The reason given for this was that it was an unfortunate “*consequence of integration of the Republic of Croatia into the system of extended European patent (in 2004) and afterwards into the European patent system (in 2008)*” (SIPO, 2010: 31). If one observes the exact figures of these very time periods, the change is clearly shown statistically - the number of patent applications in the Republic of Croatia in 2007 was 437, in 2008 was 400 and a relatively consistent decrease from then on. Another reason given for the lapse in applicants in 2009 was that the Republic of Croatia was in a poor economic state. The statistics also show that the highest number of applicants for patents were from individuals resident in Croatia. What is even more surprising to notice is that the highest number of applicants were natural persons of Croatian residence,

who applied for the most patents and made up 86% of domestic applicants, far more than those of the companies.

According to studies conducted at the end of 2010, those who did apply for patents and were residents did so mostly for fixed constructions, measuring, transportation, preparations for medical, dental or toilet purposes, machines or engines and personal or domestic articles or appliances. Those who applied for patents but were not residents did so mostly for preparations for medical, dental or toilet purposes and organic chemistry (SIPO, 2010).

When observing the Republic of Croatia in particular it is seen that most patent applications came from Zagreb County and the City of Zagreb. This is owing to the fact that this county is a developed city that is privy to business ideas and information regarding intellectual property rights and what they stand for. This then accounts for the difference in applicants within the Republic of Croatia itself.

To refer to a specific example regarding patents in the Republic of Croatia, one only has to look to the most successful and the largest pharmaceutical company within Central Europe: Pliva. Starting out as a struggling multinational company, Pliva saw success with their discovery of the antibiotic azithromycin. The company patented it in 1980 and it was in the United States Patent and Trademark Office (USPTO) amongst other patented documents that Pfizer scientists found out about the drug. It was then licensed to them and marketed as Zithromax. Pliva, however, still receives revenue for the product and this has aided their expansion in Croatia, Poland and Russia. (Idris, 2003). What is to be noted here is the economic gain a company can receive once they patent their product. This is something that the amended NIPS aims to replicate through the development of a better patent system and awareness about these kinds of positive effects that can arise from businesses researching new goods to patent.

In addition to all this, the Annual Report 2010 regarding the NIPS stated that;

“The Patent Act was amended in November 2010 in compliance with the new Regulation (EC) 469/2009 of the European parliament and Council of 6 May 2009 concerning the Supplementary protection certificate (SPC) for medicinal products for human use and veterinary medicinal products, thus having achieved a complete

alignment with the current acquis communautaire in the field of patent rights.”(SIPO, 2010: 38)

This suggests that despite the decrease in patent application, an attempt to amend this problem was made in accordance with EU regulations to ensure a stronger future regarding patents in the Republic of Croatia.

4.3.3.2. Trademarks

In contrast to patent applications, trademark applications increased from 2009 to 2010. However, similarly to patent applications this was owing to the residents of the Republic of Croatia as opposed to non-residents.

What was observed in the Annual Report 2010 regarding the NIPS was;

“a decline in number of requests for the extension of trademark protection to the Republic of Croatia via the Madrid system for the international registration of trademarks, continued, while the number of applications filed directly to the Office increased compared to 2009.” (SIPO, 2010: 46).

This mixed result suggested that applicants preferred to go directly to their intellectual property rights office than to go through lengthy international regulations in order to apply for trademarks. However, this observation is not solely seen in the Republic of Croatia. Statistics show that the USA has the highest number of resident applicants who prefer to go directly to their Office than take the international route via the Madrid system for international registration trademarks. Germany, however, contrastingly prefers filing for trademarks through the international route.

Trademark applications through the national route are mostly done so by legal entities. In 2010, the legal entity with the highest number of trademark applications was Jadran-Galenski laboratorij d.d., followed by Apipharma d.o.o. Once again, the highest trademark applications originated from the Zagreb County and the City of Zagreb. In fact, 68% of all applications were filed by applicants from that county representing the fact that although the Republic of Croatia is a developed country, its business district is limited to the city (SIPO, 2010).

In the sector of requests for the extension of protection via the international registration, the trademarks applied for were pharmaceutical products and electronic instruments and devices,

computer programs and software. From 2009 to 2010, what is seen is an increase in trademark application in cosmetics and perfume and cleaning products and garments, footwear, head covers, and a decrease in education, entertainment, sporting and cultural activities and foodstuffs. This makes a strong comment on the priorities of the social and economic spheres of the country.

Regarding trademarks as a whole, the Act Ratifying the Singapore Treaty on the Law of Trademarks was implemented in 2010. The focus of this act is to simplify the trademark registration procedure and encourage new technology within this field.

4.3.3.3. Industrial Design

Similarly to trademark applications, industrial design applications increased from 2009 to 2010. In fact, what was interesting was that the economic crisis had no impact on industrial design applications at all (in stark contrast to that seen in patent and trademark applications during 2008/9).

Once again resident applicants were the highest in industrial design applications with a steady increase from 233 in 2009 to 261 in 2010 (SIPO, 2010).

Strangely, the number of industrial designs registrations filed by international route by means of the Hague Agreement started to grow in 2010 whereas they had been decreasing the year before. This then caused the total of non-resident applicants for industrial designs to increase because even though they were not applying via the national route they were doing so via the international route.

Company-wise the largest number of individual applications and requests for the registration of designs was filed by Instrumentaria d.d - a resident company. With 172 requests in total, it made them the highest industrial design applicant despite there being 8 other resident companies who applied in 2010 (SIPO, 2010). If one considers the applications for the registration of industrial designs filed directly with the intellectual property office of the Republic of Croatia, one can see that industrial designs were filed mostly for; furniture, packages and containers for the transport or handling of goods, articles clothing and decorative objects. Non-residents, however, favoured devices for recording, telecommunications or data processing.

As was seen in the trademark and patent applications, the Zagreb County and the City of Zagreb accounted for most industrial design applications. With 59% of the total number of applications the strength of this county with regards to the NIPS is clearly seen. It is important to note here that the previous year the majority of applications also originated from this county. With regards to industrial designs as a whole, in the year 2010, no changes were made to the legal sector of this intellectual property right (SIPO, 2010).

4.3.3.4. Geographical Indications and Designs of Origin

SIPO has record of only one request being filed for the Geographical Indications and Designs of Origin in 2010. This new request was registered as the Lace of Svetomar. Regarding Geographical Indications and Designs of Origin as whole, no new legislative changes took place in 2010.

4.3.4. Copyright and Related Rights

“In the area of copyrights and neighbouring rights, the objectives of the Directive on the harmonisation of certain aspects of copyright and related rights in the information society (2001/29/EC) are to adapt legislation on copyright and related rights to reflect technological developments and to transpose into Community law the main international obligations arising from the two treaties on copyright and related rights adopted within the framework of the World Intellectual Property Organisation (WIPO).” (Screening, 2007: 2)

Throughout 2010, a number of inspectional supervisions were carried out to several organisations. These included; Croatian film directors’ guild (DHFR), Croatian composers’ society (HDS ZAMP), Association for the protection, collection and distribution of phonogram producers’ rights (ZAPRAF), and Croatian performers’ rights collecting society (HUZIP), Journalists’ rights protection association (DZNAP), Croatian writers’ association (DHK) and Association for the protection of publishers’ rights (ZANA). As far as irregularities within the Copyright and Related Acts sphere of these organisations, none were found. A special interest, however, was taken with the DZNAP as they filed for the extension of validity of the interim decision concerning their collective rights. After results of the inspections showed that;

“except for the agreement on mutual representation with foreign organisation, DZNAP fulfils all provisions of Articles 156 to 168 ZAPSP and professional criteria

set up by the Regulations and by authorisation of the Office from 7 November 2008.”(SIPO, 2010: 65)

The request for the extension was then granted until the end of 2011.

Similarly to this, the DHK requested authorisation regarding collective management of authors' rights for the reproduction of copyright work for private use. After inspection saw that the DHK adhered to regulation, this request was also granted.

In general, the Copyright and Related Rights Act itself was amended to include specifics for the efficient running of the NIPS. It was agreed that the section that stated that an organisation must have its residence or registered office in the Republic of Croatia for it to be granted collective management of rights needed to be expanded to include all EU Member States. This was done so to increase cooperation between the EU Member States and the Republic of Croatia with regards to intellectual property rights issues, suggestions and significant programmes. In addition to this, the regulations for the granting of these collective rights were redrafted to fit the new amendments of the Copyright and Related Rights Act.

In 2010 the Government of the Republic of Croatia, the Ministry of the Economy, Labour and Entrepreneurship, the Ministry of Interior, the Constitutional Court of the Republic of Croatia, municipal and county courts and State Archive all requested that the Republic of Croatia's intellectual property rights office draws up expert opinions and statements on the copyright and related rights situation. This request was adhered to and the interpretations of regulations, opinions and statements were all compiled for the viewing of the respective parties. WIPO once again was involved in this particular situation in 2010, in ensuring that knowledge and information regarding the professionalism of intellectual property rights was made available and easily accessible.

4.4. Raising Awareness about Intellectual Property Rights

Although there are many improvements and successes evident throughout the development of the NIPS in the Republic of Croatia, what is lacking is sufficient awareness of the subject. This has sparked a campaign within different parties, institutions and organisations dedicated to raising awareness through a number of different mediums and projects.

The Government of the Republic of Croatia felt that they could offer awareness both directly and indirectly. Directly, it was stated that the government would ensure that the public were informed of the successes and downfalls of the NIPS, respective state administrative bodies as well as the incidental significant successes. This would be done through media coverage of all of the above. Another method was to introduce training of intellectual property rights and include it in the educating of the relevant state administrative bodies. Taking this further it was discussed that the government would incorporate this information about the protection of intellectual property rights into the educational system to promote it. A similar situation would then also be seen within economic policy initiatives, thus broadening the spectrum of awareness to include a completely diverse field. Indirectly, it was stated that the government would sponsor events concerning intellectual property rights as well as send officials to attend a selected number of them.

The Ministry of Justice stated that awareness within the judicial system would be raised through the training of judges to deal with cases related to intellectual property rights. In addition to this, it was discussed that they would ensure that there was relevant legal literature, latest commentary as well as reference books on the subject available and accessible to ensure correct understanding of the field and what it entails.

On the topic of raising awareness through training; SIPO stated that an internal Academy of Intellectual Property should be established, MSES agreed to assist with the possibility for the creation of a Department for Intellectual Property at universities (ensuring all faculties are aware themselves of what the major aspects of intellectual property rights are) and the government agreed to establishing an Academy for Senior Civil Servants, which will also include training in intellectual property.

Other bodies concerned with raising awareness include; a) CMAs - whose focus is primarily on raising awareness about copyright and related rights, b) the CCE - whose infrastructure will positively assist with the channelling of important information generated in NIPS and will specifically focus on intellectual property rights within business enterprises, and c) SIPO - will encourage patent and trademark representatives, raising awareness in these specific fields as a result (SIPO, 2010).

4.5. Future of the IPR system in the Republic of Croatia

“Confident that we have largely achieved the abovementioned goals, we can state that in 2010, the Office performed its tasks successfully, that the users performed their work with the Office without obstacles or limitations, and that the whole system is strategically improved and better positioned in the international strategic climate.”
(SIPO, 2010: 1)

This is a statement given by the Director General, Željko Topić, MBA at the end of the year 2010. It shows that a sufficient amount of work was done regarding the NIPS in the Republic of Croatia and that these improvements were indeed successful. As discussed above, the main concerns of the Intellectual Property Rights Office were public awareness and the effectiveness of the legal system with reference to intellectual property rights implementation and infringements. These were of course dealt with and discussed throughout 2010. However, a number of issues that were new to the NIPS as well as those that could not be successfully dealt with at the time were put forward in the new National Strategy for 2010-2012.

Within the National Strategy of 2005-2010, a declaration was made by the government that;

“A basic corrective mechanism shall be constituted by the users of the system, who shall make complaints relating to the deficiencies of the system during the implementation of the measures referred to in this Strategy. The Government shall encourage associations, chambers and other associations of users of NIPS to file regularly such complaints to the bodies competent for relevant aspects of the system.”(SIPO, 2006)

These complaints have indeed played an important role in the shaping of what the NIPS should look like in the future. The Intellectual Property Office will thus use these findings to their full potential in order to shape the National Strategy of 2010-2012, ensuring that the demands of both the individual person as well as the companies are met.

At the end of the review of achievements from 2005–2011 it should be mentioned that according to the report 2012 of Intellectual Property Rights Index (IPRI) the Republic of Croatia did not achieve the success it had in the previous year and that not many changes were made from 2011 keeping the Republic of Croatia’s IPRI on 5.3 and its world ranking as 65th country on the scale (IPRI, 2012).

5. Conclusion

From the historical view on IPRs it is noticeable that developed countries, what are referred to as the “North” in this particular paper, all developed their intellectual property systems during the era of industrialisation. Observations made from the experience of those countries are summarised in order to help developing countries or the “South” to follow their steps and establish IPR systems of their own. In the global economy of today where goods of all sorts and kinds are traded across the globe, such a system seems to be more than necessary to establish rules and induce global trade. The issues encountering that situation, however, relate to developed countries and their concerns for protection of their traded goods. On the other hand, it relates to developing countries that argue that a stronger IPR system would hinder their access to new knowledge. From this debate it is notable that a trade-off between these sides and their requests is necessary and this is where WTO has stepped in and employed the TRIPS agreement.

Further in this work some of the theoretical views and empirical results on the impacts of stronger IPRs on developing countries are discussed. Briefly, several channels of technology diffusion are presented which can eventually lead to an economic growth. Although most of the theoretical views and empirical evidence found in the literature are ambiguous and call for further research, it can be stated that some of the positive impacts on economic growth are visible and cannot be ignored. Any results from the research, however, should be interpreted with caution and with the consideration of several other factors and circumstances.

After having a closer look on the impacts of intellectual property rights this paper observes and reports about the development of the IPR system in the Republic of Croatia. These are referred to here as the NIPS and are discussed from the moment of their development to their amendment and implementation. The aims and goals of the National Strategy of 2005-2010 are laid out in such a fashion that the contrasts between the NIPS in place and the one being amended are obvious. What is also discussed is the starting point at which the government of the Republic of Croatia was faced with when developing the amended NIPS and how this affected institutional and legislation frameworks. These are then gone into more detail with the paper analysing the exact changes made to the frameworks and the effect this had on the social and economic spheres of the country. National and international cooperation including successful projects implemented in the Republic of Croatia are then discussed and the positive effects are observed. The paper then goes on to mention industrial property protection as a

whole, specifically dealing with each sub-heading- patents, trademarks, industrial design and geographical indications and designs of origin- discussing their successes and downfalls from a period of 2006-2010. How raising awareness for intellectual property rights are then discussed focusing on each group's role in the matter and finally a brief look into the future of intellectual property rights in the Republic of Croatia is provided with the assurance that the public's voices are important to the development of the NIPS.

This paper presents theoretical views and empirical findings from the related literature on intellectual property rights and their impact on economic growth in order to observe the development of intellectual property rights in the Republic of Croatia with an understanding of their importance for the economic development.

In the past 20 years the Republic of Croatia has been working on the introduction of the necessary legislature in order to increase its competitiveness and economic growth. One of the final steps is to raise the awareness about intellectual property and introduce the concept of IP as a compulsory subject to schools and universities. It is also important to implement a series of measures to inform the public in order to prevent unintentional law breaking.

The first part of the thesis showed the path for the Republic of Croatia that ought to be followed in order to increase the competitiveness and economic growth based on experience of other countries. The second part shows what has been done in the Republic of Croatia in regard to this but the empirical research that would show the effects of those efforts is absent. This could be due to the fact that the national strategy needs more time to show its effects and the fact that the Republic of Croatia was hit by the recent recession and still attempts to recover.

The short-term objective of the national strategy was to provide IPR protection in accordance with the EU and mid-term objective is to ensure the application of IPRs as a driver for economic growth up to the standards of EU countries with the highest European Creativity Index (ECI).

REFERENCES

Borensztein, E., J. De Gregorio, and J.-W. Lee (1998), "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics* 45, 115-135.

Chang, Ha-Joon (2001), "Intellectual Property Rights and Economic Development: Historical lessons and emerging issues", *Journal of Human Development: A Multi-Disciplinary Journal for People-Centered Development*, 287-309.

Chen, Y. and T. Puttitanun (2005), „Intellectual Property Rights and Innovation in Developing Countries“, *Journal of Development Economics*, 78, pp. 474-493.

CIPR (2002). Commission on Intellectual Property Rights, "Report of the Commission on Intellectual Property Rights. Integrating Intellectual Property Rights and Development Policy".

Available at: http://www.iprcommission.org/graphic/documents/final_report.htm

(Last accessed 20 June 2012)

DZIV (2009), "Prava Intelektualnog vlasništva - Minivodič za poslovnu zajednicu", Državni zavod za intelektualno vlasništvo.

Eaton, J. and S. Kortum (1996), "Trade in Ideas: Patenting and Productivity in the OECD", *Journal of International Economics*, 40, pp. 537-570.

Falvey, R. and N. Foster, (2006). "The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence". United Nations Industrial Development Organization.

Fink, C. and K. E. Maskus (2005), "Intellectual Property and Development: Lessons from Economic Research", Washington, DC: The World Bank/Oxford University Press.

Fink, C. and C. A: Primo Barga (2005), "How Stronger Protection of Intellectual Property Rights Affects International Trade Flows", in C. Fink and K. E. Maskus, Intellectual Property and Development: Lessons from Recent Economic Research, Washington, DC: The World Bank/Oxford University Press.

Garmon, C. W. (2002). "Intellectual Property Rights: Protecting the Creation of New Knowledge Across Cultural Boundaries". American Behavioral Scientist 2002, 45: 1145.

Glass, A. J. and Saggi, K. (2002), "Intellectual property rights and foreign direct investment", Journal of International Economics 56, 387–410.

Görg, H. and D. Greenaway (2003), „Much Ado about Nothing: Do Domestic Firms Really Benefit from Foreign Direct Investment?“, Discussion Paper No. 944; Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor.

Helpman, E. (1993). "Innovation, imitation, and intellectual property rights", Econometrica, 61(6), 1247-1280.

Idris, K. (2003). "Intellectual Property - A Powerful Tool for Economic Growth", World Intellectual Property Organization 2003.

IPRI (2012), Report 2012: Intellectual Property Rights Index, <http://www.internationalpropertyrightsindex.org/profile?location=croatia>
(Last accessed 15 August 2012)

Katulić, T. (2006), „Uvod u zaštitu intelektualnog vlasništva u Republici Hrvatskoj“, CARNet, Zagreb

Khan, Zorina B. (2002). "Intellectual Property and Economic Development: Lessons from American and European History". Commission on Intellectual Property Rights, Study Paper 1a.

Mansfield, E. (1994), "Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer", Discussion paper no. 19, Washington, DC: International Finance Corporation.

Maskus, K. E. (1993). "Intellectual property rights and the Uruguay round". *Economic Review*, 78(1), 11-25.

Maskus, Keith E. (1997). *The International Regulation of Intellectual Property*. Prepared for the IESG Conference, "Regulation of International Trade and Investment," University of Nottingham, Nottingham, UK.

Available at: <http://www.adelaide.edu.au/cies/papers/sp9711.pdf>

(Last accessed 21 June 2012)

Maskus, Keith E (2000a). "The Economics of Intellectual Property Rights and Globalization: Dancing the Dual Distortion", *Intellectual Property Rights in the Global Economy*. Chapter Three.

Available at:

<http://www.asiaing.com/intellectual-property-rights-in-the-global-economy.html>

(Last accessed 5 August 2012)

Maskus, K.E. (2000b), *Intellectual Property Rights and the Economic Development*, Prepared for the series "Beyond the Treaties: A Symposium on Compliance with International Intellectual Property Law", organized by Fredrick K. Cox International Law Center at Case Western Reserve University.

Maskus, Keith E. and Mohan Penubarti (1995), "How Trade-Related are Intellectual Property Rights?" *Journal of International Economics*, Vol. 39, 227-248.

Schneider, P. (2005), "International Trade, Economic Growth and Intellectual Property Rights: A Panel Data Study of Developed and Developing Countries", *Journal of Development Economics*, 78, pp. 529-547.

Screening (2006), “Screening Report Croatia, Chapter 7 – Intellectual property law”.

Available at:

http://ec.europa.eu/enlargement/pdf/croatia/screening_reports/screening_report_07_hr_internet_en.pdf

(Last accessed 15 August 2012)

SIPO (2010), “Annual Report”, State Intellectual Property Office of Republic of Croatia.

SIPO (2006), “National Strategy for the Development of the Intellectual Property System of the Republic of Croatia 2005-2010”, A Document of the Government of the Republic of Croatia, State Intellectual Property Office of the Republic of Croatia.

Smarzynska, Beata K. (2002), “Composition of Foreign Direct Investment and Protection of Intellectual Property Rights: Evidence from Transition Economies”, The World Bank.

Available at: http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2002/03/08/000094946_02022604025132/additional/123523322_20041117184551.pdf

(Last accessed 15 August 2012)

Trade tripwires. (1994, August 27). The Economist, 332(7878), 61.

APPENDIX

A.1. English Summary

The main goal of IPR protection is to foster innovation and by increasing innovation activities induce economic growth. This can be viewed as a direct impact of IPR protection, whilst IPR protection indirectly affects economic growth by increasing technology inflows through the main channels of technology diffusion such as FDI, licensing, trade or patenting.

The thesis presents lessons from history concerning the development of IPRs. Here it can be noted how developed countries established most of their intellectual property systems during their industrialisation whereas they had more access to new technologies, new knowledge and the whole process of industrialisation. With the introduction of TRIPS this was limited and new international rules of trade and protection became valid and reduced countries ability to have freedom in establishing their own IPR protection systems. The introduction of TRIPS divided the developed countries from developing countries further. The North was especially interested in employing stronger IPRs to protect their patented goods from being imitated in the South, whilst the South argued that stronger protection of IPR was going to hinder their access to new knowledge and technology and indirectly diminish their growth.

The historical view and lessons from history of IPRs and their impact on growth are an introduction to an observation of the development process of IPRs in the Republic of Croatia. After the Republic of Croatia became an independent country it established its independent IPR system. The needed changes were made in accordance with international standards and a successful IPR system along with the national action plan and national strategy were established. Under the supervision of the European Union and in co-operation with WIPO the Republic of Croatia has achieved a balanced performance of activities on the strategic plan of the national strategy 2005-2010 and has continued to implement the measures and perform the activities from the national strategy 2010-2012. The essential success was achieved in strategic points such as raising the level of awareness of and respect for intellectual property rights, and regional and global integration of national intellectual property system.

A.2. German Summary

Das Hauptziel der Schutz der Rechte an geistigem Eigentum (IPRs) ist es, Innovation zu fördern und durch die Erhöhung der Innovationsaktivitäten, wirtschaftlichen Wachstum zu erhöhen. Dies kann als direkte Auswirkung der IPRs betrachtet werden, während IPRs indirekt Wirtschaftswachstum durch Zuflüsse der Technologie, wie zum Beispiel ausländische Direktinvestitionen (FDI), die Lizenzierung, Handel oder Patentierung, beeinflussen können.

Die Diplomarbeit stellt von der historischen Perspektive die Entwicklung der IPRs vor, wo man merkt, dass die entwickelte Länder den größten Teil ihrer IPRs Systeme während ihrer Industrialisierung geschaffen haben, wobei sie größerer Zugang zu neuer Technologie, neuem Wissen und dem gesamten Prozess der Industrialisierung zur Verfügung hatten. Mit der Einführung der TRIPS dies war begrenzt und neue internationale Regeln des Handels und der Schutz wurden gültig und dies begrenzte die Entwicklungsländer, Freiheit bei der Festlegung ihrer eigenen Systeme der IPRs auszuüben. Die Einführung der TRIPS teilte tiefer die entwickelten Länder von den Entwicklungsländern. Entwickelte Länder wurden vor allem an der Einführung der IPRs stärker interessiert, um ihre patentierte Güter von der Versuche der Imitation in Entwicklungsländern zu schützen. Entwicklungsländer argumentierten, dass die Einführung der strengern IPRs ihren Zugang zu neuem Wissen und der Technologie behindert und indirekt das Wirtschaftswachstum vermindert.

Die historische Betrachtung der IPRs und deren Auswirkungen auf das Wachstum machen eine Einführung aus, um das Entwicklungsprozesses von IPRs in Kroatien vorzustellen. Seitdem Kroatien unabhängiges Land geworden ist, erforderlichen Änderungen wurden vorgenommen, um in Einklang mit der internationalen Normen zu sein und ein erfolgreiches IPR-System zusammen mit dem nationalen Aktionsplan und nationaler Strategie wurden etabliert. Unter der Aufsicht der Europäischen Union und in Zusammenarbeit mit der WIPO hat Kroatien eine ausgewogene Durchführung von Aktivitäten auf dem strategischen Plan der nationalen Strategie 2005-2010 erreicht und beschäftigt sich weiter mit der Umsetzung der Maßnahmen von der nationalen Strategie 2010-2012. Der Erfolg wurde an strategischen Punkten wie eine Erhöhung der Sensibilisierung für und Respekt vor der IPRs, sowie regionale und globale Integration des nationalen Systems der IPRs erreicht.

A.3. Curriculum Vitae

Personal Details

Name:	Zrinka Kraljević
Date/Place of Birth:	May 6th, 1984/Komin, Croatia
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Education

2002-present	International Business Administration (Diplomstudium), Vienna University
09/1998-06/2002	High School (Grammar School), Ploče, Croatia

Work experience

2006 – 2010	Styria Multi Media Promotion, Marketing, Distribution
2003 – 2004	Caritas – Vienna Administration